

ABSTRACT

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**CONTROLLED RADICAL POLYMERIZATION PROCESS USING
A SMALL AMOUNT OF STABLE FREE RADICAL**

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COMPANY KNOWN AS:

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The invention relates to a process for the polymerization of at least one monomer which can be polymerized via a radical route, in the presence of a stable free radical and of a polymerization initiator, such that, per 100 mol of monomer, the molar amounts of stable radical (SFR) and of initiator (INIT) are such that $[(\text{SFR}) \times F_{\text{SFR}}]/[(\text{INIT}) \times F_{\text{INIT}}] < 0.15$ and $F_{\text{SFR}} \times (\text{SFR}) < 0.2$ mol, in which F_{SFR} represents the functionality of the stable free radical and F_{INIT} represents the functionality of the initiator. The process according to the invention has advantageous kinetics, allows the production of grafted or block copolymers and can be carried out in an extruder.